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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,753	03/18/2004	Jacob Charles Forney III	CTR/215US	6878

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,753

Applicant(s)

FORNEY ET AL.

Examiner

Geoffrey L. Knable

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 29-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-7-2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-28, drawn to a non-pneumatic tire/wheel/vehicle, classified in class 152, subclass 310.
 - II. Claims 29-39, drawn to a method for manufacturing a non-pneumatic tire, classified in class 156, subclass 112 or class 264.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the tire as claimed can be made by another and materially different process in which the solid fill composition is not filled through the openings - e.g. by assembling a preformed fill with an outer tire or molding around a preformed fill.
3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Steven Benintendi on April 18, 2006 a provisional election was made without traverse to prosecute the invention of group I, claims 1-28. Affirmation of this election must be made by applicant in replying to this

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Office action. Claims 29-39 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. Claims 18 and 25-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 18 and 25, reference is made at several locations to "approximately 8" openings. It however is not clear what the scope of "*approximately 8*" is in this context, i.e. in the context of a value that would seem to only have integer values, it being further stressed that the specification does not further help ascertain what is and is not "approximately" 8, this rendering the scope of these claims indefinite.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1, 2, 6, 7, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Collier (US 917,545) or Johnston (US 668,292).

Collier (note esp. openings b and c) and Johnston (note esp. rectangular openings illustrated in fig. 4) each disclose non-pneumatic tires including a toroidal tube with openings in its inner circumferential surface and a solid fill in the hollow chamber of the tube as required by claim 1. As to claim 2, note page 1, line 63 of Collier and page 1, line 29 of Johnston (porous rubber being considered to read on a "foam"). As to claims 6 and 7, the tube is rubber. As to claims 13 and 14, a wheel is clearly shown and relatively low speed vehicles are taught (e.g. page 1, lines 100-101 of Collier and page 1, lines 23-26 of Johnston).

11. Claims 1, 6, 7, 11, 12, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Schragin (US 1,503,432).

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Schragin discloses a non-pneumatic tire including a toroidal tube ("d" or "d+s") with openings (a') in its inner circumferential surface and a solid fill material within the hollow chamber of the tube as required by claim 1. As to claims 6 and 7, both d and s comprise rubber. As to claim 11, note layers "s" and "d". As to claim 12, note part "s" presents a raised area that corresponds to the tread pattern (be it a "slick" pattern or otherwise). As to claims 13-14, a wheel/rim as well as relatively low speed vehicle is implicit (note also apparently rim "r" in fig. 4).

12. Claims 1-3, 6, 7, 9 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Lieshoud (US 3,646,983).

Van Lieshoud discloses a non-pneumatic tire including a toroidal tube filled with a solid fill (e.g. figs. 2 and 5). Further, the tire would include openings in its inner circumference where the spokes penetrate the toroidal tube as required by claim 1. As to claims 2-3, a cellular and thus foam material is suggested and further it is suggested that the tire (which includes the cellular core) can be formed from polyurethane - note esp. col. 2, lines 11-16. As to claims 6-7, rubber is also suggested as a suitable tire material. As to claim 9, note for example fig. 1 illustrates 12 spokes that would provide 12 openings. As to claim 12, a tread pattern is clearly illustrated in fig. 2. As to claims 13-14, it is considered that the ring structures (e.g. "5" or "9") serve to mount the tire and can be termed a rim, the reference further clearly suggesting relatively low speed vehicles.

13. Claims 1-3, 6-8 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 2,047,637 to Riddoch et al.

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GB '037 discloses a non-pneumatic tire including a toroidal tube (5) filled with a solid fill (4). Further, the tire would include openings in its inner circumference where the spokes penetrate the toroidal tube as required by claim 1. As to claims 2-3, polyurethane foam is suggested (e.g. page 1, lines 69-77). As to claims 6-7, rubber is suggested as a suitable tire material (e.g. note claim 2 in the patent). As to claim 8, the patent publication indicates that fillers "may" be incorporated, it being considered that this is an express indication that such are optional and thus covers without such fillers are considered within the reference disclosure (note page 1, lines 29-63). As to claim 12, a tread pattern is clearly illustrated in figs. 1-2. As to claims 13-14, application to for example bicycle tires is suggested, this being considered to be a relatively low speed vehicle.

14. Claims 4, 5, 15-17 and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Lieshoud (US 3,646,983) as applied above, and further in view of Smith et al. (US 2,709,471).

As to claims 4-5 and 15-16, Van Lieshoud does not provide any specific requirements for the hardness of the foam fill material. It is however considered to have been well within the skill of the ordinary artisan to select an appropriate hardness of the fill to yield the desired end product characteristics through routine optimization, only the expected results following any particular selection. Note further Smith et al., also directed to non-pneumatic tires including a cushioning fill material (13), provides evidence that the ordinary artisan understands that Shore durometer hardnesses thereof of 30-75 are known to be suitable and effective for such layers (col. 2, lines 22-

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28), this further indicating that selection of values within the claimed range would have been obvious to the artisan with a reasonable expectation of providing a suitable and effective resilient tire filling. Claims 17 and 19 are rejected for the same reasons set forth with respect to corresponding claims 2-3 and 12. As to claim 20, Van Lieshoud suggests application to toys, baby carriages, bicycles, industrial vehicles (e.g. col. 1, lines 9-13), it being considered that such vehicles conventionally include tires with dimensions consistent with those claimed. As to claim 21, Van Lieshoud does not characterize the required hardness of the tire cover material. It is however considered to have been well within the skill of the ordinary artisan to select an appropriate hardness for the tire cover to yield the desired end product characteristics, only the expected results following any particular selection. Note further Smith et al., also directed to non-pneumatic tires including a cushioning fill material (13) and surrounding cover (10), provides evidence that the ordinary artisan understands that Shore durometer hardnesses of 50-90 for the tire cover are known to be suitable and effective for such layers (col. 2, lines 9-21), this further indicating that selection of values within the claimed range would have been obvious to the artisan with a reasonable expectation of providing a suitable and effective tire. As to claims 22-24, it is considered that the ring structures (e.g. "5" or "9") serve to mount the tire and can be termed a rim, the referenced vehicles being clearly inclusive of relatively low speed vehicles. Further, the suggested application to toys, baby carriages, bicycles and various industrial vehicles (e.g. col. 1, lines 9-13) is considered to render application to vehicles consistent with claim 24 obvious.

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15. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Lieshoud (US 3,646,983).

As to claim 8, as already noted, Van Lieshoud suggests that rubber can be used for the tire/tube but does not further characterize specifics of the composition. It is considered however that the artisan would have determined whether reinforcing agents are needed and been able to select accordingly, it being submitted that the noted applications (e.g. baby carriages, toys) would have been understood as inclusive of uses that would place fewer demands on material strength and thus omission of reinforcing agents would have been particularly obvious in such instances. As to claim 10, the exemplary tire illustrated in Van Lieshoud includes 12 spokes and thus would have 12 openings. Lower spoke count wheels including for example 8 spokes are however considered to have been known and conventional per se, application of the reference teachings to such being obvious for only the expected results.

16. Claims 18 and 25-28 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

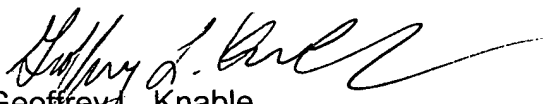
The closest prior art does not reasonably suggest or render obvious a non-pneumatic tire/wheel/vehicle consistent with these claims. Although Schragin (US 1,503,432) does suggest a non-pneumatic tire that can include plural apparently rectangular openings (e.g. a' in fig. 11), a reasonable reading of the teachings of this reference would not suggest a non-pneumatic tire as claimed which include, inter alia, 8 rectangular openings dimensioned as claimed.

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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
April 26, 2006